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LYONDEL GARDENS
Morgantown, West Virginia

Hybridizers:

Nell Lanham Leonian

Armen Leonian

offer to a select clientele TODAY
the masterpieces of TOMORROW:

DELPHINIUMS

DAYLILIES

ORIENTAL POPPIES

All seeds cross pollinated by hand.
Colors that are different; form and
texture that are surprises.

1947-48

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U. S. Deptt. of Agriculture

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Washington, D.C.

The Lyondel Letter

This year has been a full one in the lives of the Leonians who are going on with the Lyondel plant-breeding work. It has been very busy but at the same time highly educative. The mishaps which have delayed us on some occasions are the same ones which cause your difficulties, slugs that demolish a flat over night; cyclamen mite; dry weather just when it can do the most harm. The things that discourage you have a similar effect with us but, judging from the way in which you try again, we are an optimistic group—we flower growers.

We here have every reason to be cheerful since we can see ways in which we do better this year than last. This is another way of saying that there is much room for improvement to be made and that we expect to develop as we learn more from training and experience and go about putting these lessons into practice. However there are certain standards and conditions which have made Lyondel Gardens one of the leading delphinium breeding centers in the country—standards and conditions which are as much a part of the program as they were ten years ago.

1. All seeds are hand pollinated. No open pollinated ones are sold because we feel such practice is not in keeping with our high hopes for the product you will see bloom in your garden.

2. The price has been the same through good years and bad. Inflation is not influenced by our price schedule.

3. Our stock is frankly one made up from the best of our own plants crossed with each other and with the best we are able to grow from those of other careful hybridizers.

4. Our seed supply is necessarily limited because of our rigorous selection of parent plants and the limits put upon our program by conditions growing out of the war period.

5. We endeavor to use the newer and better stock to the exclusion of that which has been out-moded in our garden.

6. The changing weather in the Morgantown area with its full share of hot temperature in mid-summer tends to produce plants with longer-than-average life span.

How to Grow Delphiniums Successfully

The first thing to do is to find out in which zone of delphiniums you are located. There are four of these: the annual, the biennial, the short-lived perennial, and the true perennial. In Florida and certain parts of the South delphiniums are strictly annuals, dying off after the first display of bloom. In certain other parts of the South they behave as biennials; in most parts of Midwest they are biennial or short-lived perennials, while in North they are true perennials. Once you determine your zone, you will know what to expect and spare yourself all kinds of disillusionment. Having determined this, there remains another important factor: are you located in the fall-sowing or spring-sowing zone? Where seasons are short and July and August are likely to be warm and dry, fall-sowing may be disastrous, and spring should be the time to sow the seeds. Therefore you should purchase your seeds in the fall, put them in tightly stoppered vials, and keep them

in the refrigerator. The next spring they will germinate just as well as if they were freshly harvested. But if your season is long enough for the seedlings to grow for at least two months before freezing weather arrives, then you may sow your seeds about the middle of September when cooler and rainier days arrive. If your season is cool enough, the seeds may be sown the first week in August, rarely earlier. In any case you are strongly urged to sow half of your packet of seeds in the fall, and the other in the spring, particularly if you are in doubt about your zone.

Excessive rains play havoc with young seedlings, therefore seedbeds should be given glass protection against the rains. The glass should be covered with one thickness of burlap to cut down the intensified heat of direct sunshine. A free circulation of air being essential, the glass should be tilted up all the time. The rain will run off the slanting surface without reaching the seedlings, and the air will continue to circulate and thus prevent a dead atmosphere which is conducive to the appearance of all sorts of harmful bacteria and fungi. Light has no effect on the germination of delphinium seeds; let there be light.

Use deep flats to start seedlings, or flower pots if you have but a few seeds. Place gravel in the bottom to afford drainage, and fill up with any good garden soil, preferably one taken from under a well established sod. The soil should be neutral, neither acid nor alkaline. If you are in no position to determine this, you may go on the assumption that any good garden soil is good enough for delphiniums. Add one third sand of two-thirds of soil to improve the texture. Avoid peat moss, sphagnum moss, woods' dirt, wood ashes, leaf mold, manure; never, never use any fertilizer; just soil and sand, and you are safe. Place a pinch of Semesan in the seedpacket, shake well, and sow *thickly* right on the surface of the soil, press down firmly by a piece of 2 x 4, and cover with soil not deeper than twice the diameter of the seed. Plunge the flat or the pot part way in water and allow the capillarity to bring the water to the surface of the soil; then remove from the water, allow to drain, and put it in a sheltered place, preferably a cold-frame with glass and burlap protection. Fence the cold-frame against animals. Never allow the surface soil to dry; it is fatal. Overwatering is equally fatal. After the seedlings came up (10 or 15 days), water them with Semesan solution, one level tablespoonful to the gallon. This prevents post-emergence damping-off. Use enough of this solution to moisten the surface soil not more than one-fourth of an inch deep. Germination of seed is very high when expanded mica is used as a medium for starting plants. The 1946 year book has several reports on this subject by users.

Where seeds are sown in the fall, the seedlings may be left undisturbed until the following spring. But its seasons are long, the seedlings may be transplanted into bands and later on into the field. In case of spring sowing, one transplanting prior to fielding out is recommended. Fertilizer and lime applications should be made months ahead of transplanting, or at least two months after; never at the time of planting. In the winter the cold frames should receive hay or straw protection in addition to glass. Early in the spring when the young seedlings begin to push their way up, they should be transplanted into wooden bands, 3x 3 x 4, kept in the cold frame for five or six weeks, and set out in their permanent place. This reduces transplanting losses to the minimum. In warmer regions a northern exposure is preferable; in cooler regions full sunlight is the most beneficial. If you are located in a region where mildew is prevalent, dust with sulfur. Cyclamen mite

may be controlled with rotenone. The symptoms of this pest manifest themselves in the form of a gnarled appearance of growing tips and buds, a purplish black color, and a general stunting. Remove all parts thus affected, and burn. It will be still more effective if you remove all parts above the ground; then spray or dust liberally with rotenone. The second growth will be free from the pest. Do this to all plants after the first and the second blooming; and again late in the fall. This will save yourself a lot of grief. There is nothing you can do against crown rots. Dig up at once any plant thus affected, together with the soil around it, and throw in the fire, otherwise the rot will spread and wipe out all your plants in no time. After the spikes attain some length, they should be supported with bamboo canes six feet long, and successively tied to the very tip of the flowering spike. Older plants do not need winter protection. They should be fertilized at least twice a year, once before each blooming. Smaller amounts of fertilizers applied at more frequent intervals, will give excellent results. Any complete fertilizer will do the work. Broadcast and lightly work in.

Seed Offerings for 1947-48

1. **BLUE-MAUVES:** The outer sepals sky blue, the inners soft mauve. Or the two colors may be charmingly blended. Golden yellow eyes, brown eyes, black eyes, lavender eyes, large and prominent; or there may be no eyes. Enormous flowers and enormous, well shaped spikes are here. The architecture of the spike reaches its perfection in this group.
2. **SAPPHIRE-PURPLES:** The colors are intense, vivid, sparkling. The outer sepals are deep blue, the inners royal purple. Or the two colors may be blended, fused, with a mosaic of patterns rarely seen. White eyes, yellow eyes, brown eyes, black eyes, beautifully matching or contrasting, are strikingly displayed by the huge flowers and spikes.
3. **ORCHIDS:** Self colors in various soft and clear shades of orchids; delicate blushes on white background; smokies of infinite charm, and many tints impossible to describe but easy to fall in love with. Big, very big flowers, perfectly formed; broad and circular, as well as narrow, aster-like, with matching or contrasting eyes. To see these is to be captivated for life.
4. **ROYAL PURPLES:** Scintillating, regal colors, absolutely self. Deep orchid, plum purple, bluish purple, with white eyes for startling contrast, with brown eyes, with golden eyes, or with no eyes at all. Large beautifully formed flowers on spikes of perfect architecture. A rippling luminosity and a durable satisfaction come with this group.
5. **BLUES:** Soft sky blues, ultramarine blues, blues of all shades possessing a purity of color that was only a dream but few years ago. Individual flowers satisfactorily large; spikes long and graceful.
6. **WHITES:** Special Notice: The amount of white to be produced in our garden is uncertain for this year because of the fact that we lost the 1945 seedlings which would be our heavy bloomers this summer. Therefore we are saving what all we have for use in the mixture. You will not order whites this season—1947. We are very sorry.

7. MIXTURES: If you need only one packet of seeds, choose this. It contains all the colors described above. *The quality is absolutely the same.*

Prices

All seeds \$2.50 per packet, a minimum of 100 seeds. Cash with order. No C. O. D. orders.

Join the American Delphinium Society

Learn the latest about your favorite flower. You will get more from your package of Lyondel seeds if you read and use the information you get in the year book that comes with your \$2.00 dues. The Secretary is Charles J. Wenk, 1058 Allen Street, Springfield, 8, Mass. The date for the delphinium show at Horticulture Hall in Boston is set for June 27th and 28th.

About the Lyondel Hybrid Daylilies

As in the past we sell seeds but no plants of daylilies. The latter are distributed by Wayside Gardens, Mentor, Ohio, in run-of-the-field lots. Later there may be named varieties but not until they and we are sure that the flower in question is one that will reflect credit on its name and be distinctive among the 1200 named varieties already on the market.

Each year the best of our new bloomers are kept for parent plants and as time goes on these are further rogued to insure seed stock which is the best we can produce and which we consider unusual in color, form or texture. To be worth using a plant must show superior characteristics in more than one respect. With our most careful selection not all blooms will be as good or better than the best available now but, as with all hybrids, there will be very remarkable specimens here and there that will give you the thrill that is the reward for your time and effort used in growing them. If you are one of the lucky people and a true gardener, you will have such a feeling of inward satisfaction as must be the experience of an artist who looks upon a new work of a promising young painter. You have made a "discovery." Along with your pleasure in the beauty of this new flower, you will have a certain pride in having it in your garden a few years ahead of those who are interested in the "tried and true." These varieties must be several years old for the grower to have them now—at a fancy price.

You will receive in your package only hand-pollinated seeds whose parent plants fit the descriptions of the various groups. Truly an opportunity to get tomorrow's Daylilies today!

How to Grow Daylilies from Seed

"Seeds may be sown either in the fall or in the spring. Fill the flats or the pots with rich garden soil, and plant the seeds. In about ten days or two weeks the seedlings will be

up. However some of the seeds will remain dormant for months or even for a year, therefore the soil should not be discarded too soon. Upon the approach of winter months, the flats or the pots should be taken indoors, to a sunny window or to a greenhouse. If such facilities are lacking, it is best to delay the sowing of the seeds until the following spring because some of the seedlings might not be able to withstand the severe winters of some parts of our country. This applies only to the young, tender seedlings, as the mature plants can tolerate much cold. If allowed to grow through the winter months, the seedlings will become quite husky. By early spring they may be transplanted to wooden or paper bands, set out in the cold frame to harden and to establish themselves, and finally transplanted to their permanent place. Some may bloom the same year, but usually it takes two years from seed for the blossoms to appear. If sown in the spring, the seedlings should not be disturbed until the following spring; but where winters are mild, they may be transplanted in the fall."

Seed Offerings for 1947-48

1. THE RED GROUP:—included here are all shades of red from deepest, darkest red to scarlet, ruby, cherry, and deep rose. No muddy colors, no brownish or fulvous cast are present in the parent plants. And while hybrids should not be expected to breed true, there will be many seedlings as good as, and even better than the parents. There are many "red" hemerocallis now on the market, glowingly and extravagantly described, but in reality there very few REDS. I bring to you vivid, joyous, dazzling colors that will ripple and splash against your happy eyes. Also there will be a great many forms or flowers: broad sepals and petals opening flat and circular; or funnel shape, amaryllis-like; and long, narrow sepals and petals like the flowers of gigantic azaleas, several of them opening together in one cluster. There will be large flowers and small ones; tall scapes and short scapes, and all the graduations in between. All these apply to the other colors as well.

2. THE MAROON GROUP:—maroons so dark as to seem black; wine purple, plum purple, mulberry, old rose, and all intermediate shades are here. Rich, colors, irresistible to most men.

3. PASTEL SHADES:—the most unusual colors and color combinations are here. Softest, glowing, silvery, salmons, pinks, lavender, peach blush, light rose, raspberry pink, sunset-on-clouds shades, lilac and deep cream combinations, self colors, fused colors, and many soft delicate tints that cannot be described by mere words. See them, own them, and rejoice.

4. BICOLORS:—We are offering these separately this year because we have a varied group of parent plants that should give you light and dark values of maroon, nearly brown, red, a real pleasure: Quantity is limited.

5. THE MIXED GROUP:—This is a mixture of the four color groups listed above, and will be selected by those who want only one package of seed.

The Price of Seeds

Thirty seeds for \$2.50. The supply is very limited because many of the mother plants are shy seeders. In sending your

orders, always indicate a second choice because we expect to be sold out of certain items quickly. Where seed stock is heavier you will get larger packages.

About Lyondel Hybrid Oriental Poppies

We are again producing Oriental Poppy seed, hand pollinated. There are all variations of shade from the most delicate baby pink to deep rose and crushed raspberry; some are pinkish lavender or cherry red. If you can picture these colors in flowers that have tall, sturdy stems, large well-formed blossoms and disease resistant plants you have an idea what you get in Lyondel poppies—a type of plant that is beautiful in the garden—one that you will be especially happy to have in your garden.

Where the stems are treated in boiling water they last very well in the house to give a most striking decorative effect as cut flower arrangement. In our climate blooms are produced for a full month, longer if the season is not too hot.

How to Grow Poppies from Seed

"Seeds may be sown either in September or early in the spring. Cold frames only should be used because the roots of poppies go very deep. Mix the seeds with some fine dirt to prevent crowding, and sow in rows right on the surface of the seedbed. Press them down firmly by a piece of 2 x 4, place two thicknesses of damp cheesecloth over the surface and water thoroughly but gently. Put glass on the frame to prevent rains from beating down the seeds and seedlings, but shade the glass with a piece of burlap. When the seedlings begin to come up, remove the cheesecloth. As it begins to get cooler, remove the burlap. By the time freezing weather arrives, the seedlings will be large enough to winter over very well with glass protection alone. If your seasons are not long enough, sow in the spring. The seedlings should not be disturbed until the following September; then they may be transplanted to a temporary or permanent bed. The newly transplanted seedlings should receive mulch protection the first winter; after that none is necessary. When it is more convenient to transplant in the spring it should be done very early and, if possible, just before the late April or early May rains."

Success or failure with poppies will depend upon one important factor, namely drainage. On poorly drained lands poppies will be a dismal failure, while on well drained land they will grow like weeds and will be hard to eradicate. Before deciding to grow poppies, you should determine if they can be grown successfully under your climatic conditions."

Seed Offerings for 1947-48

This year the seeds are offered in one group only, a mixture of plum purples, various shades of maroon, different intensities of mauve and lavender selfs, salmon pinks, apple blossom pinks, watermelon pinks, and fused shades rarely if ever seen before. Some reds, oranges, and scarlets are likely to be present among your seedlings, but they will constitute a comparatively small percentage of the lot for none of these are among the parents.

Prices

Two dollars a packet.

The Postscript

It is our hope that you did well with your flowers last year and that you enjoyed the things from our garden that bloomed in yours. When you are ready to order again a few suggestions here may make things move smoothly for both of us:

If you are in West Virginia include 2% sales tax with your order.

Your letter will be acknowledged promptly but the seeds will be sent when they mature: late July for poppies and delphiniums, September for day-lilies.

Visitors are welcome to come during the blooming season which is at its best about the middle of June. Our stock is limited in quantity because of our small space—a mere speck on the landscape.

If you follow directions you should do well with our seeds. If not we hope you will be fair with us as we shall be with you, though we make no guarantee as to seed germination.

We wish you luck for 1947.

LYONDEL GARDENS

Morgantown, W. Va.

